HYDROLOGY E12/D1 3 PLANS

E12/D1

3 Plan

ENGINEERS · PLANNERS · PHOTOGRAMMETRISTS

BOHANNAN-HUSTON INC.

4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491
330 GARFIELD, SANTA FE, NEW MEXICO 87501 505 988-7671

July 7, 1982

Mr. Fred Aguirre
City Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Drainage Report for the First National Bank, Money-Matic, Coors–Montano Branch

Dear Fred:

Comments discussed at your meeting with Rhonda Wolfenbarger on June 30, 1982, have been addressed and incorporated on the drawings for the referenced project. Transmitted herewith are the revised drawings for your files.

The pond calculations for the ditch along the west side of Coors Road are as follows:

Volume Available:

$$\frac{(340'x1x35') + (280'x2'x30') + (190'x3'x20') + (120'x4'x10')}{43{,}560\ ft.^3/ac.}$$

= 1.03 ac.ft.

Volume Needed: (see Sheet 3 and 4 of Appendix "A" of the Drainage Report)

When Culvert @ Capacity
Volume needed = 0.012 ac.ft. <1.03 ac.ft.

When Culvert ½ full of sediment
Volume needed = 0.56 ac.ft. <1.03 ac.ft.

PRINCIPALS
JERRY R. BOHANNAN, P. E. & L.S.
LARRY W. HUSTON
DONALD T. CREMANS, P. E.
C.J. (SKIP) MEAD, P. E.
MICHIAL M. EMERY, P. E.

ASSOCIATES
ANDRES ARAGON VIAMONTE, P. E.
JACK EICHORN
ROBERT H. GREENLEE, P. E.
G. LEE TRUSSELL
ISAAC J. PINO, P. E.
RAMON LARA, P. E.
DARRELL L. WADE, P. E.
PATRICK L. STIEHR, P. E.
DAVID M. Y. MILLIKAN, P. E.

A copy of the approved Temporary Drainage Easement will be sent to you shortly. The drawings as revised should satisfy the comments expressed at your meeting on June 30, 1982.

If you have any questions, please call Rhonda Wolfenbarger or me.

Sincerely yours,

Michial M. Emery

Michial M. Emery, P.E.
Vice President

cc: Mr. Lawrence Kline w/enclosures
Mr. Dan Sabo w/enclosures
Mr. Dan Sparacino w/enclosures

Enclosures

RFW/dlh
Job No. 2 022 4

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 30, 1982

Bohannan Huston Inc.
C/O Rhonda Wolfenbarger
Design Engineer
4125 Carlisle NE
Albuquerque, New Mexico 87107

REF: FIRST NATIONAL BANK MONEY-MATIC, COORS-MONTANO BRANCH (E12-D1)

The referenced report is approved subject to some additional construction details, calculations, and the temporary easement discussed in our meeting.

If you have any questions regarding the above, please feel free to call me at 766-7644.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Drainage File
Reading File

ENGINEERS PLANNERS PHOTOGRAMMETRISTS

BOHANNAN-HUSTON INC.

4125 CARLISLE BLVD., N. E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
6712 VISCOUNT BLVD., EL PASO, TEXAS 79925 915 778-4491
330 GARFIELD, SANTA FE, NEW MEXICO 87501 505 988-7871

June 29, 1982

Mr. Fred Aguirre
Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Drainage Report for the First National Bank Money-Matic, Coors-Montano Branch

Dear Mr. Aguirre:

In order to provide additional landscaping along the perimeter of the site, the First National Bank has increased the size of the site. This change does not affect the basic drainage concept as presented in our report. The comments you made concerning the original drainage report are still applicable. Your comments have been addressed as follows:

(15-B) The pond volume calculations are as follows:

- o Volume needed – .0868 ac.ft. (see Drainage Report – Appendix 'A,' Sheet 7)
- o Volume available =

$$(280'x24'x\tfrac{1}{2}') + (110'x14'x\tfrac{1}{2}') = 4130 \text{ ft.}^3$$

$$\frac{4130 \text{ ft.}^3}{43{,}560 \frac{\text{ft.}^2}{\text{ac.}}} = 0.0948 \text{ ac.ft.}$$

Therefore, the pond volume is adequate.

(15-B2) Allowable discharge of the pond is:

$Q = CiA$ where $C = 0.35$

$i = 3.9$ in./hr.

$$A = \frac{280'x24'}{43560 \frac{\text{ft.}^2}{\text{ac.}}} = 0.09 \text{ ac.}$$

$Q = .35(3.9)(.09) = .123$ cfs

PRINCIPALS
JERRY R. BOHANNAN, P. E. & L.S.
LARRY W. HUSTON
DONALD T. CREMANS, P. E.
C. J. (SKIP) MEAD, P. E.
MICHIAL M. EMERY, P. E.

ASSOCIATES
ANDRES ARAGON VIAMONTE, P. E.
JACK EICHORN
ROBERT H. GREENLEE, P. E.
G. LEE TRUSSELL
ISAAC J. PINO, P. E.
RAMON LARA, P. E.
DARRELL L. WADE, P. E.
PATRICK L. STIEHR, P. E.
DAVID M. Y. MILLIKAN, P. E.

15-(B2) The overflow spillway will have a 4" PVC pipe installed to allow the pond to discharge to the roadside ditch along Montano Road.

15-(B6) It will be the full responsibility of the First National Bank to provide all maintenance needed for upkeep of the temporary drainage easement during the duration of time that the Money-Matic Branch will occupy this site.

(16) The temporary drainage easement shown on Plates 1 and 2 has been recorded. A copy is enclosed with this letter.

(17-C) The legend has been modified to accommodate your comments (see Plates 1 and 2).

(19-A) An elevation for reference to the Albuquerque Control Survey Vertical Datum and its location is indicated on Plates 1—4.

(19-C) The bench mark shown on the plan sheets (ACS BM 3-E12) is visible from and in close proximity to the site. For this reason, an on-site bench mark is not necessary.

(21-C) Enclosed is a copy of the approved grading and paving detail for temporary improvements to Montano Road along the site.

(21-H) Sidewalk, ponding areas, etc. have been defined more clearly (see Plate 2).

(21-M) The water block profiles are shown on Plate 2.

(22) When the bank is vacated, the building and all surface improvements will be removed and the site will be revegetated with native grasses.

A vicinity map has been added to Plate 1 and the Zone Atlas sheet number is on all the plates under "References."

As stated above, the basic drainage concepts have not been affected by the new dimensions for the site. All of your previously stated concerns have been addressed.

We will appreciate your prompt review and approval of the drainage report and grading plan. If you should have any questions, please do not hesitate to contact Dave Millikan, Rhonda Wolfenbarger or me.

Sincerely yours,

Michial M. Emery

Michial M. Emery, P.E.
Vice President

cc: Mr. Dan Sparacino
Mr. Herb Denish

Enclosure

RFW/dlh
Job No. 2 022 4

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 20, 1982

David M.Y. Millikan
C/O Rhonda Wolfenbarger
4125 Carlisle NE
Albuquerque, New Mexico 87107

REF: FIRST NAT. BANK MONEY-MATIC-COORS AND MONTANO BRANCH
(E12-D1)

Dear Mr. Millikan:

Attached is the checklist with my comments, Special Order 19 Form, and Drainage Convenant for the referenced report. Please address the items checked no and any corresponding comments.

If you have any questions concerning the above, please feel free to call me at 766-7644.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Drainage File
Reading File

ENGINEERS PLANNERS PHOTOGRAMMETRISTS

BOHANNAN-HUSTON INC.

4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4431
330 GARFIELD SANTA FE, NEW MEXICO 87501 505 988-7871

14-82

March 25, 1982

RECEIVED
MAR 26
CITY ENGINEER

Mr. Charles Easterling
Principal Assistant City
Engineer – Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

E13-01

Dear Chuck:

Enclosed are two (2) copies of the Drainage Report for the First National Bank Money-Matic, Coors Road and Montano Road Branch. Please review as soon as possible. The owners are anxious to begin grading.

If you have any questions, please call Rhonda Wolfenbarger or me.

Sincerely yours,

Michael M. Emery

Michael M. Emery, P.E.
Vice President

Enclosures

RF/dlh
Job No. 2 022 1

RECEIVED
MAR 26 1982
ENGINEERING

PRINCIPALS
JERRY R. BOHANNAN, P. E. & L. S.
LARRY W. HUSTON
DONALD T. CREMANS, P. E.
C. J. (SKIP) MEAD, P. E.
MICHIAL M. EMERY, P. E.

ASSOCIATES
ANDRES ARAGON VIAMONTE, P. E.
JACK EICHORN
ROBERT H. GREENLEE, P. E.
G. LEE TRUSSELL
ISAAC J. PINO, P. E.
RAMON LARA, P. E.
DARRELL L. WADE, P. E.
PATRICK L. STIEHR, P. E.
DAVID M. Y. MILLIKAN, P. E.

BOHANNAN-HUSTON INC.

VOID

RECEIVED
MAR 26 1982
ENGINEERING

WITH RESPECT TO SOME MODIFICATIONS TO THE SIZE OF THE PARCEL AND CONSTRUCTION DETAIL. SEE PLAN DATED 7-6-82 FOR APPROVED CONSTRUCTION PLAN

7-9-82

DRAINAGE REPORT
FOR
FIRST NATIONAL BANK
MONEY-MATIC
COORS ROAD AND MONTANO ROAD
BRANCH

DRAINAGE REPORT

FOR

FIRST NATIONAL BANK MONEY-MATIC

COORS ROAD AND MONTANO ROAD BRANCH

MARCH 1982

PREPARED FOR

Mr. Arnold Levine, President
Money-Matic
Academy Industrial Park
3752 Hawkins Street, N.E.
Albuquerque, NM 87109

PREPARED BY

Bohannan—Huston, Inc.
4125 Carlisle Boulevard, N.E.
Albuquerque, NM 87107

DAVID M. Y. MILLIKAN
NEW MEXICO
7547
REGISTERED PROFESSIONAL ENGINEER

David M. Y. Millikan

Job No. 2 022 1

DRAINAGE REPORT
FOR
FIRST NATIONAL BANK MONEY-MATIC
COORS ROAD AND MONTANO ROAD BRANCH

TABLE OF CONTENTS

	PAGE
PURPOSE AND LOCATION	1
METHOD OF ANALYSIS	1
EXISTING CONDITIONS	1
DEVELOPED CONDITIONS	2
CONCLUSIONS	3

APPENDIX

1	Upland Runoff
2	Culvert Capacity
3–5	Upland Storage
6	Undeveloped Runoff and Developed Runoff
7	Ponding for Site
8–9	Overflow Spillway
10	Time of Concentration Table
11	Flow in Arroyo
12–13	Flow in Roadway

PLATES

Plate 1	Existing Conditions
Plate 2	Developed Drainage
Plate 3	Drainage Basins
Plate 4	Location
Plate 5	Soils Map

DRAINAGE REPORT
FOR
FIRST NATIONAL BANK MONEY-MATIC
COORS ROAD AND MONTANO ROAD BRANCH

PURPOSE AND LOCATION

The site for the First National Bank Money-Matic contains approximately 1.0 acres and is located on the southeast corner of Coors Road and Montano Road. The site slopes from the northwest to the southeast at approximately 4.0 to 5.0 percent.

According to the Soil Survey of Bernalillo County, New Mexico, the soil on the site is classified as loamy fine sand and loamy sand. These soil types are listed as belonging to Hydrologic Soil Group A.

METHOD OF ANALYSIS

The Rational Formula was used for determining the potential flow rates from upland and on-site basins during both the 10-year and 100-year storms. In determining the runoff volumes generated within the developed site, the Modified Rational Method was used. Rainfall intensities were derived from information contained in the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) Resolution No. 1980-15. Calculations are included in the Appendix.

EXISTING CONDITIONS

Upland flows which may impact the site originate in Basin A (see Plate 3). Flows north of Montano Road (within Basin A) drain beneath Montano Road in a culvert along the west side of Coors Road. The majority of flows within Montano Road are removed by inlets on each side of the street which discharge to the south along the west side of Coors Road. The remaining flows within Montano Road are diverted to the south by the crown in Coors Road. All of the flow from Basin A is collected at the entrance of the 36" concrete culvert indicated on Plate 1. The peak flow rate from Basin A is approximately 86.2 cfs during a 100-year storm.

Assuming the water ponds to an elevation equal to the centerline elevation of Coors Road, the capacity of the 36" culvert is 75.4 cfs. There is adequate storage capacity west of Coors Road to detain the peak generated within Basin A (see computations in Appendix A).

Runoff from Basin A through the 36" culvert discharges into a small natural arroyo. The arroyo is located approximately 75 feet south of the site and parallels the site's south boundary.

The runoff generated on the east side of Coors Road and the south side of Montano Road is collected in ditches within the street rights-of-way. These ditches convey the flows around the site.

It is possible that the 36" culvert underneath Coors Road could become partially filled with sediment and not function properly. If this should occur and the culvert were to operate at one-half its capacity, the storage capacity west of Coors Road would still be adequate to detain the peak flow from Basin A (see calculations in Appendix A). Should the culvert become completely filled with sediment, most of the runoff would flow across Coors Road at the low point in the crown, which is approximately 75' south of the southern boundary of the site, and discharge into the same small arroyo. Some of the runoff may flow south in the ditch along the west side of Coors Road and cross beneath the road at the next culvert. In either case, the upland flows would not impact the site (see calculations in Appendix A).

Approximately 1.5 cfs is generated on the 1.0 acre site before development. This runoff is discharged from the site onto adjacent property along the east and south boundaries of the site. Runoff discharged to the east is confined within an existing depression (shown on Plate 1).

DEVELOPED CONDITIONS

Development of the site will consist primarily of entrance drives, parking spaces, and one building. The County Planning Commission has approved this site for a temporary bank for a period of four (4) years.

Water blocks should be built at the entrances and exits to the site to prevent minor flows along Montano Road from entering the site. Culverts (18" diameter) should be placed beneath the entrance and exits along the ditch to maintain existing drainage patterns (see Plate 2). Should drainage improvements made to Montano Road in the future include curb and gutter, the culverts could be removed since the flows would be conveyed in the gutter of the roadway.

Development of the site increases the site flow rate from 1.5 cfs to 4.2 cfs (see calculations in Appendix A). The site should be graded as shown on Plate 2. The grading plan allows the flows to be discharged at the southeast corner of the site only. The runoff will be ponded in the existing depression within the temporary drainage easement to the east of the site (see Plate 2). An overflow spillway should be constructed at the northeast corner of the drainage easement (see Plate 2) to allow excess flows to drain into the existing ditch along Montano Road. The maximum water surface elevation will be 4,987.0. A minimum elevation of 4,987.5 should be maintained along the east boundary of the easement to ensure the excess flows discharge from the ponding area only at the overflow spillway. If it is desirable that the temporary drainage easement be used for other purposes in the future, the flows can be diverted to the small arroyo approximately 75 feet south of the site. If this is desired, a conveyance structure and easement will be required from the southeast corner of the site to the small arroyo.

CONCLUSIONS

1. Upland flows do not impact the site.

2. Entrances and exits should be constructed with water blocks to prevent minor flows along Montano Road from entering the site.

3. The site should be graded as shown on Plate 2. The runoff will be discharged at the southeast corner of the site and ponded in the temporary drainage easement.

4. The ponding area will be maintained by the user of this site.

5. In the event that it becomes desirable to use the temporary drainage easement for other purposes, the runoff from the site can be diverted to the small arroyo approximately 75 feet south of the site.

6. The site should be inspected by the City of Albuquerque for compliance with this report prior to issuance of a Certificate of Occupancy.

APPENDIX

RUNOFF FROM BASIN A

$Q = C_i A$ $C = 0.35$

$i_{10} = 3.90$ in/hr

$A = 41.07$ ac

$Q_{10} = (0.35)(3.90)(41.07) = \boxed{56.06 \text{ cfs}}$

$i_{100} = 6$ in/hr

$Q_{100} = (0.35)(6.0)(41.07) = \boxed{86.24 \text{ cfs}}$ ← USE

PROJECT NAME MONEY-MATIC COORS-MONTANO

PROJECT NO. 20221

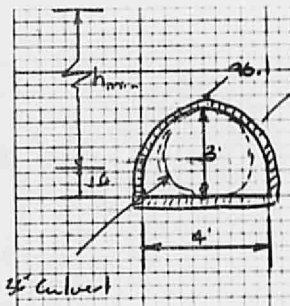
SUBJECT DRAINAGE

SHEET 1 OF

BY RFW DATE 8/16/82

CH'D DATE

ENTRANCE CONDITIONS CONTROL



CONCRETE CULVERT ENTRANCE
(ASSUME 4" THICK)

ORFICE FLOW -

$Q = CA\sqrt{2gh}$

$Q = 86.24$ cfs $C = 0.6$

$A = 7.07$ (36" culvert)

$g = 32.2$ ft/s²

$h = \left(\frac{Q}{CA}\right)^2 \frac{1}{2g}$

$h_{min} = \left(\frac{86.24 \text{ ft}^3/\text{s}}{(.6)\ 7.07 \text{ ft}^2}\right)^2 \frac{1}{2(32.2) \text{ ft/s}^2}$

h 7.99 ft - MIN HEAD REQUIRED

NOT AVAILABLE

WHAT IS Q IF WATER IS NOT TO CROSS GOORS.

$h = 4.9'$

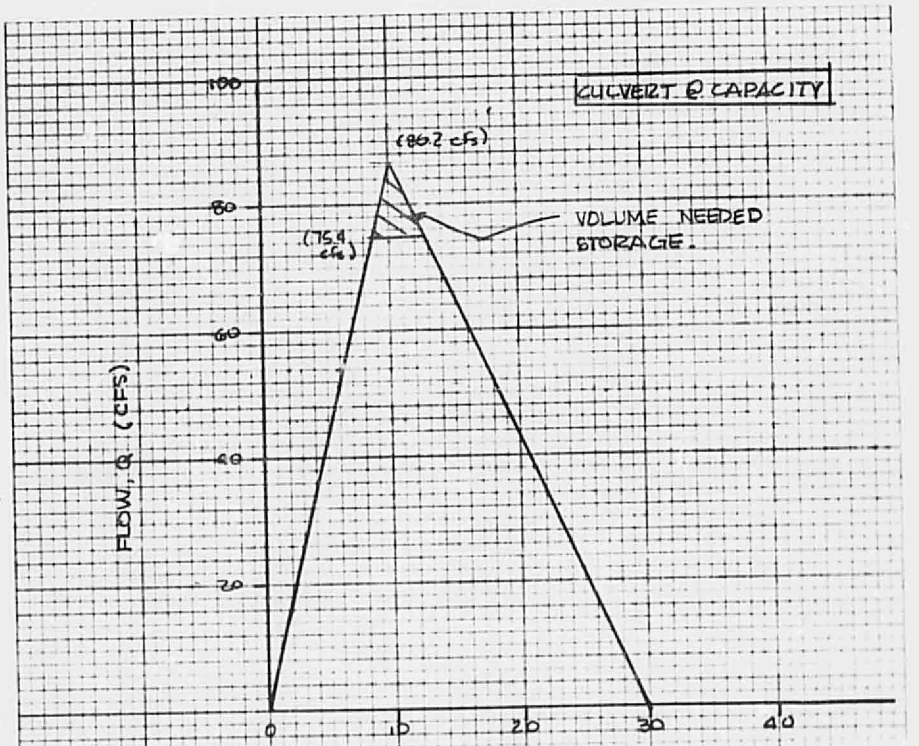
$\therefore Q = (.6)(7.07 \text{ ft}^2)\sqrt{(2)(32.2 \text{ ft/s}^2)(4.9 \text{ ft})}$

$Q = \boxed{75.4 \text{ cfs}}$

$\therefore$ ASSUME THAT 75.4 cfs GOES THROUGH THE CULVERT AND THE REST IS PONDED BEHIND THE CULVERT.

CHECK: MAKE SURE NO WATER OVERTOPS THE ROAD.

PROJECT NAME	MONEY-MATIC - MONTAÑO (code 1)	SHEET 2	OF
PROJECT NO.	20221	BY RFW	DATE 3/22/22
SUBJECT	Drainage	CH'D	DATE



VOLUME = 1/2 (b·h)

h = 86.2 − 75.4 = 7.2 cfs

b = 30 (7.2) / (86.2) = 2.5 min

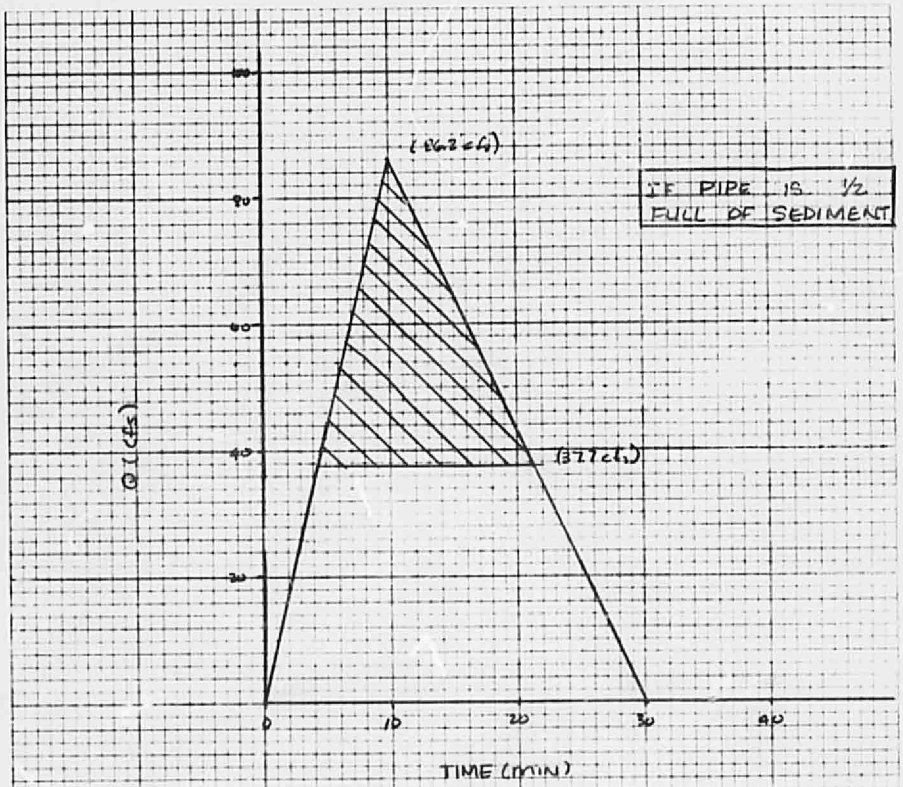
$$V = \frac{\frac{1}{2}\left(2.5\ \text{min} \times \frac{60\ \text{sec}}{\text{min}}\right)(7.2\ \text{ft}^3/\text{sec})}{43560\ \text{acre/ft}} = \boxed{.012\ \text{acre·ft needed}}$$

.012 acre·ft < 1.03 acre·ft available ∴ OK

PROJECT NAME Money Matic Coors/Montana SHEET 3 OF

PROJECT NO. 20221 BY RFW DATE 3/18/82

Drainage Report CH'D DATE



VOLUME = 1/2 (b·h)

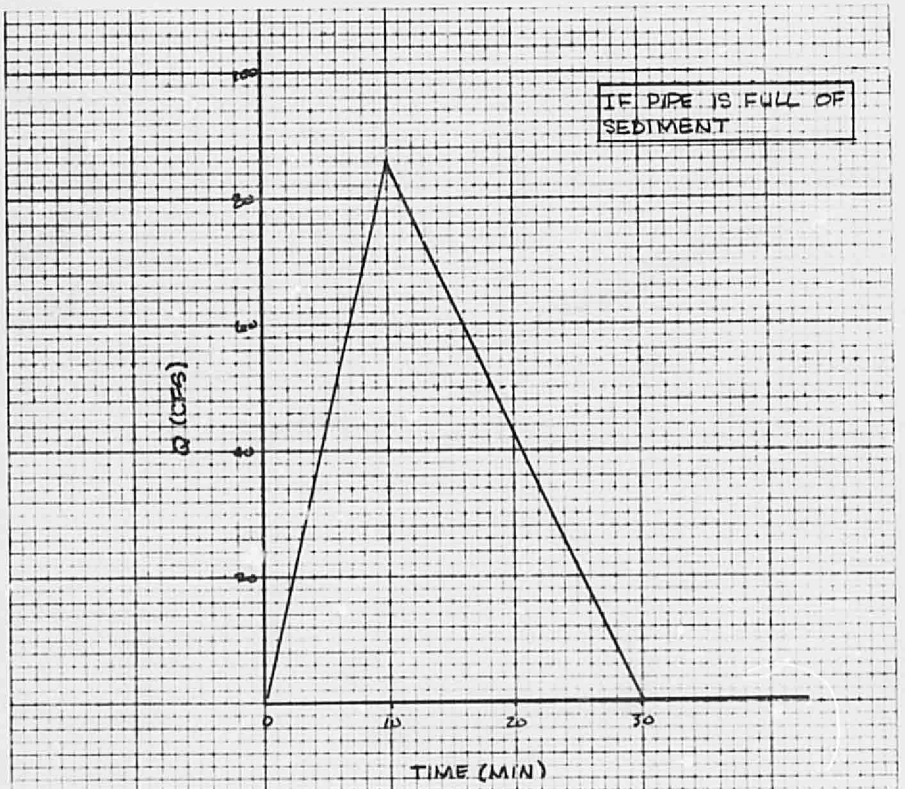
h = 86.2 − 37.7 = 48.5 cfs

b = $\frac{30(48.5)}{86.2}$ = 16.9 min

$$V = \frac{\frac{1}{2}(16.9\ \text{min} \times 60\ \tfrac{\text{sec}}{\text{min}})(48.5\ \text{ft}^3/\text{sec})}{43560\ \text{sq ft/ac}} = \boxed{.56\ \text{acre ft}}$$

0.56 needed < 1.03 available — ok

PROJECT NAME Money Matic Coors/Morhano SHEET 4 OF
PROJECT NO. 20221 BY RFW DATE 3/18/92
SUBJECT Drainage Report CH'D DATE



VOLUME = ½(b·h)

b = 30 min
h = 86.2 cfs

$$V = \frac{\frac{1}{2}\left(30\ \text{min} \cdot \frac{60\ \text{sec}}{\text{min}}\right)\left(86.2\ \frac{\text{ft}^3}{\text{sec}}\right)}{43{,}560\ \text{ac/ft}^2} = \boxed{1.78\ \text{acre ft}}\ \text{needed}$$

1.78 ≤ 1.03 NOT AVAILABLE

PROJECT NAME Money Matic Coors/Montana SHEET 5 OF
PROJECT NO. 20221 BY RFW DATE 3/18/82
SUBJECT Drainage Report CH'D DATE

FLOW ACROSS SITE

BEFORE DEVELOPMENT

Q = C i A

i_{10} = 3.9 in/hr i_{100} = 6.0 in/hr
A = 1.0 acre

C = 0.25 - Small Class "A" Soil.

Q_{10} = 0.25 (3.9)(1.0) = 0.98 cfs

Q_{100} = 0.25(6.0)(1.0) = 1.5 cfs ← USE

AFTER DEVELOPMENT

0.59 acres - PAVED/BLDG/ETC - C = 0.95
0.41 acres - LANDSCAPE - C = 0.35 - After compaction & landscaping

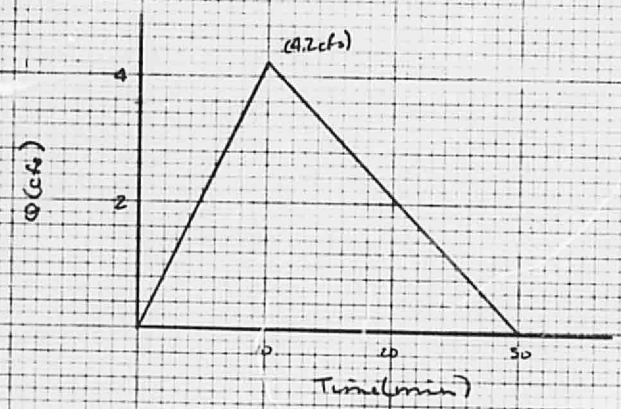
∴ AVERAGE C FOR SITE = 0.70

Q_{10} = (.70)(3.9)(1.0) = 2.73 cfs
Q_{100} = (.70)(6.0)(1.0) = 4.20 cfs ← USE

AN ADDITIONAL 2.7 cfs RUNOFF FROM SITE

PROJECT NAME	MONEY-MATIC COORS/MONTANO	SHEET 6	OF
PROJECT NO.	20221	BY RFW	DATE 3/09/82
SUBJECT	DRAINAGE	CH'D	DATE 3/16/82

AREA NEEDED FOR PONDING:



Volume: 1/2 bh
b: 30 min
h: 4.2 cfs

$$V = \frac{\frac{1}{2}(30\,\text{min} \times 60\,\frac{\text{sec}}{\text{min}})(4.2\,\frac{\text{ft}^3}{\text{s}})}{43560\ \text{ft}^3/\text{acre}} = \boxed{.0868\ \text{acre ft}}\ \text{needed}$$

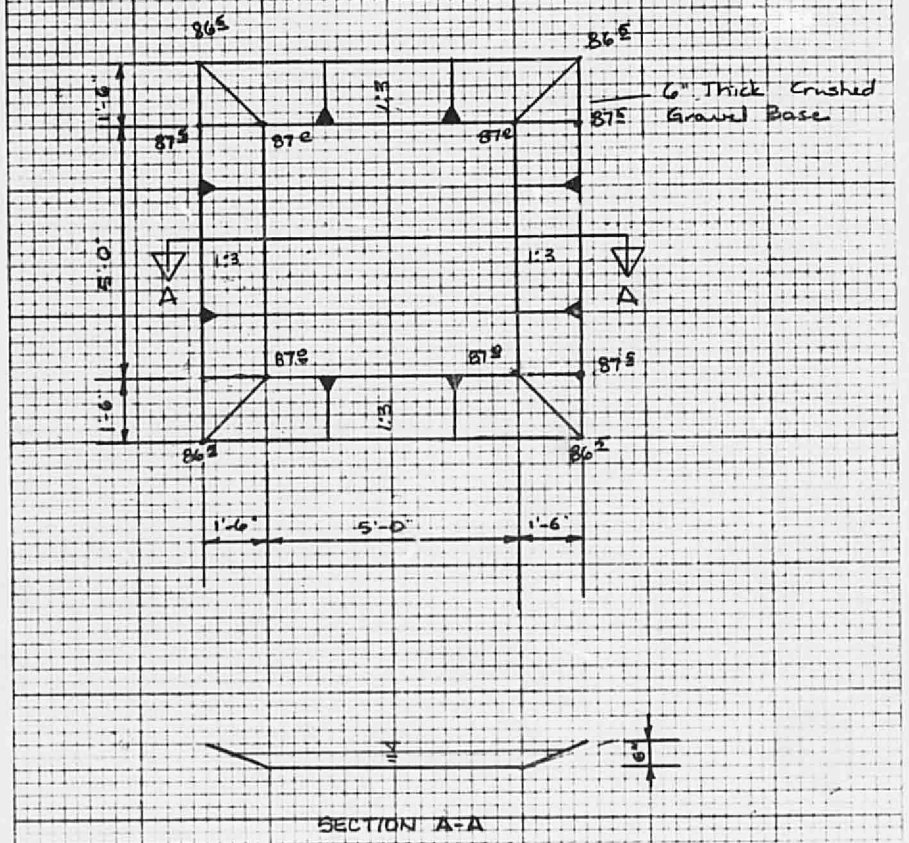
AVAILABLE: .0941 acre ft (max. water surface elevation = 4987.0)

DEPTH will be close to the max. allowable depth.

PROJECT NAME Money-Matic (Coors/Montaine) SHEET 7 OF
PROJECT NO. 22021 BY RFW DATE 3/11/82 3/16/82
SUBJECT Drainage CH'D DATE

OVERFLOW SPILLWAY

NEED @: 4.2 cfs



SECTION A-A

PROJECT NAME	Money Matic Corp/Montana	SHEET 8	OF
PROJECT NO.	20229	BY RFW	DATE 3/23/82
SUBJECT	Drainage	CH'D	DATE

6.11

check depth = Weir

$Q = CLH^{3/2}$ need Q = 4.2 cfs
C = 3.0

if H = 0.4
L = 6.2'

∴ Q = 4.7 cfs > 4.2

TRY H = 0.35
L = 6.05

Q = 3.76 cfs < 4.2

TRY H = .38
L = 6.14

Q = 4.3 cfs CLOSE ENOUGH

∴ Velocity = Q/A

A = .38 (5) + .38 (1.14) = 2.33 ft²

$V = \frac{4.2 \text{ cfs}}{2.33} = \boxed{1.8 \text{ ft/s}}$

PROJECT NAME Money Matic Grand Montana SHEET 9 OF
PROJECT NO. 20221 BY RFW DATE 3/23/82
SUBJECT Drainage CH'D DATE

T_c CALCULATIONS

$$T_c = .00013 \frac{L^{.77}}{S^{.385}}$$ - (TIME OF CONCENTRATION)

BASIN	L	S	T_c (hr)	10 YR STORM	100 YR STORM
OFF-SITE	~2150 ft	.052	.15	3.9	6.0
ON-SITE	270	.044	.03	3.9	6.0

PROJECT NAME MONEY-MATIC CODE: MONTAÑO SHEET 10 OF

PROJECT NO. 70221 BY DFW DATE 3/11/82

SUBJECT Drainage CH'D DATE

DEPTH OF FLOW IN SMALL ARROYO SOUTH OF SITE

MANNING'S FORMULA

Q: 75.4 cfs

S: .031 ft/ft

n: 0.025

B: 0

Z: 3

$Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$ — GET DEPTH FROM PROGRAM

$\boxed{d = 1.67 \text{ ft}}$ ∴ will not enter the site

A:

$Q = VA \quad V = \frac{Q}{A}$

IF CULVERT IS FULL OF SEDIMENT AND ALL OF FLOW CROSSES CODRS AND DISCHARGES INTO THE ARROYO.

Q: 86.2 cfs

S: .031 ft/ft

n: .025

Bw: 0

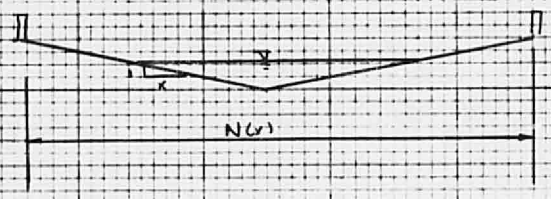
$\boxed{d = 1.76 \text{ ft}}$ will not enter the site

A: 1.76(3)(1.76) = 9.29 ft²

$Vel = \frac{86.24}{9.29} = \boxed{9.3 \text{ ft/s}}$

PROJECT NAME	MONEY-MATIC CODRS/MONTANO	SHEET 11	OF
PROJECT NO.	20221	BY DRW	DATE 3/16/82
SUBJECT	DRAINAGE	CH'D	DATE

DEPTH OF FLOW IN ROADWAY



USE OPEN CHANNEL FLOW PROGRAM

N(x) = 34'

x = 68 ← Side Slope
Q = 1.7 cfs
SLOPE = .03
n = .02

d = .1144 ft = 1.37 in

A = 68(.1144)(.1144) = .89 ft²

Q = VA ∴ V = Q/A

Vel = 1.7 / .89 = 1.9 fps

```
SS        68.0000 ENT↑
SS        68.0000 ENT↑
BW         0.0000 ENT↑
n           .0200 GSBA
Slope       .0700 GSBB
Q          1.7000 GSBC
                  GSBD
d(ft)      0.1144  ***
          12.0000   Y
d(in)      1.3726  ***
```

N(x) = 18'

x = 36
Q = 2.0 cfs
Slope = .02
n = .02

d = .167 ft = 2.0 in

A = 36(.167)² = 1.0

Vel = 2.0 cfs / 1.0 ft² = 2.0 fps

```
36.0000 ENT↑
36.0000 ENT↑
 0.0000 ENT↑
  .0200 GSBA
  .0200 GSBB
 2.0000 GSBC
        GSBD
 0.1666  ***
12.0000   Y
 1.9999  ***
```

PROJECT NAME Money Matic Coal / Montana SHEET 12 OF
PROJECT NO. 20221 BY RFW DATE 3/23/82
SUBJECT Drainage CH'D DATE

N(x) = 18"

x = 36

Q = 0.5 cfs

S = .0069

n = .02

d = .12 ft = 1.45 in

A = .12(36)(.12) = .53 ft²

∴ V = $\frac{.5}{.53}$ = .95 fps

```
36.0000 ENT*
36.0000 ENT*
 0.0000 ENT*
  .0200 GSBA
  .0069 GSBB
  .5000 GSBC
        GSBD
 0.1209  ***
12.0000   x
 1.4509  ***
```

PROJECT NAME Money Matic Cor's/ Montana SHEET 13 OF

PROJECT NO. 20221 BY RFW DATE 3/23/82

SUBJECT Drainage CH'D DATE

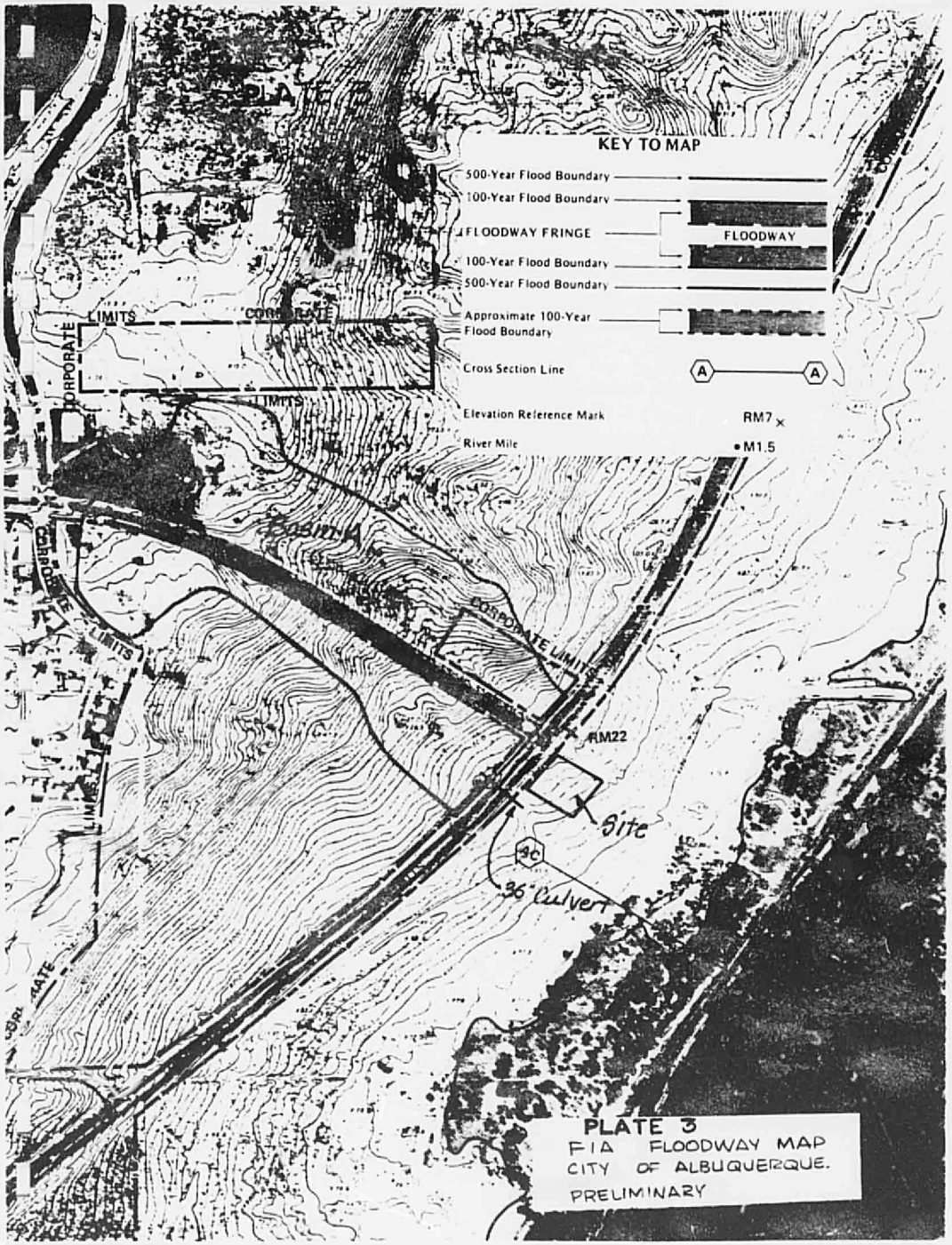
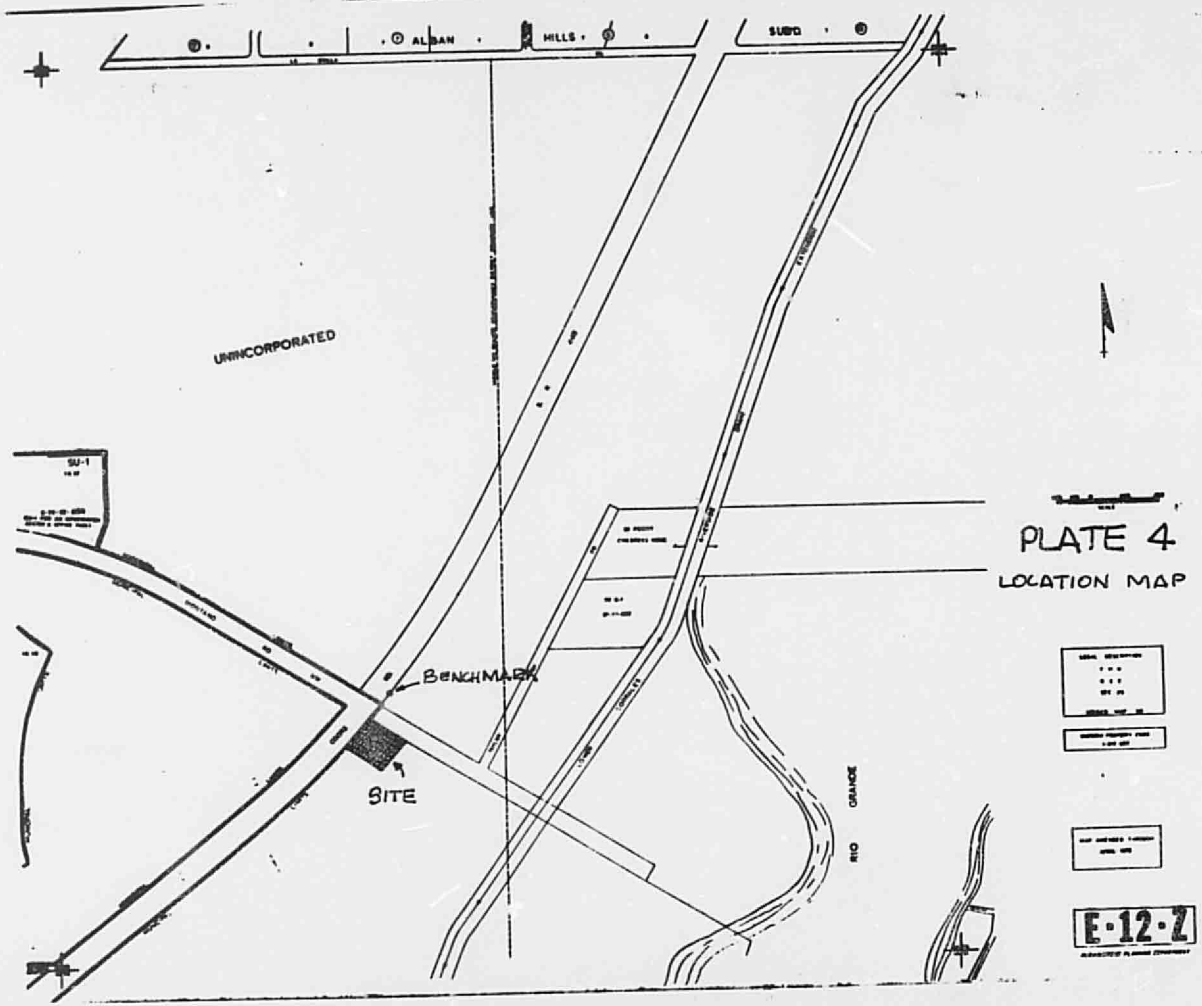
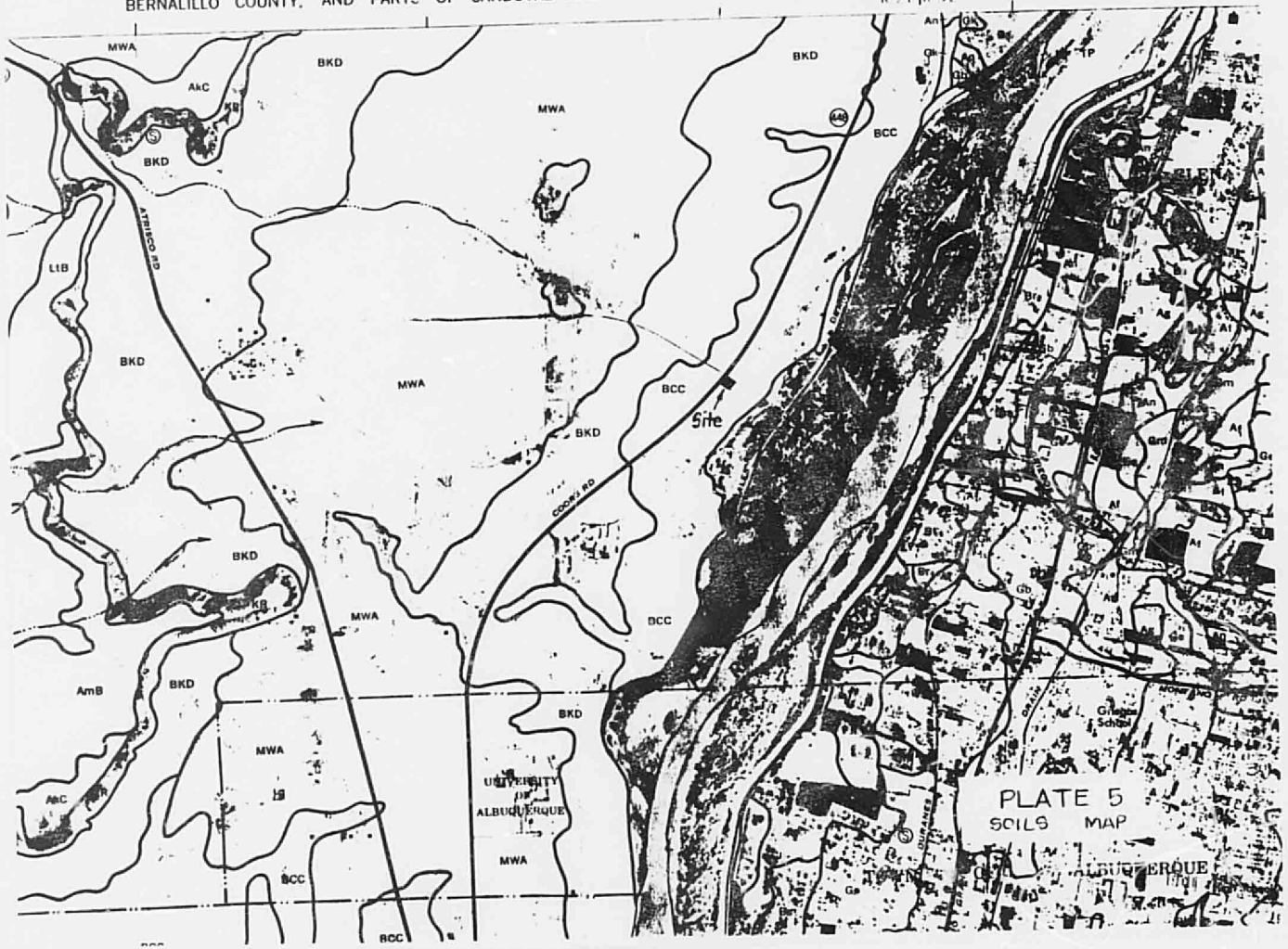


PLATE 3
FIA FLOODWAY MAP
CITY OF ALBUQUERQUE.
PRELIMINARY


ALBAN
HILLS
UNINCORPORATED
BENCHMARK
SITE
RIO GRANDE
PLATE 4
LOCATION MAP
E-12-Z

BERNALILLO COUNTY, AND PARTS OF SANDOVAL AND VALENCIA COUNTIES, NEW MEXICO — SHEET NUMBER 20



AGENDA ITEM NO. 12
COUNTY PLANNING COMMISSION
September 2, 1981
CZ-81-53

CZ-81-53 Herbert M. Denish & Assoc., agent for Ovenwest Inc. and 1st National Bank, request a change of zone from A-1 to C-1 for an unplatted portion of the SW/4 of Sec 25, T11N, R2E, located on the southeast corner of Coors and Montano Roads NW, containing appoximately 1 acre. (E-12)

COMMENTS FROM OTHER DEPARTMENTS TO THE CPC 9/2/81

Transportation:	The Coors Corridor Study has developed a concept for access control for Coors. The concept identifies total driveway restriction on Coors. The North Valley River Crossing Study specifies access control to Montano east of Coors. Upon implementation of these projects, access to this site will be prohibited. Temporary access for this interim period could be granted with the condition that access is temporary and that future access must be provided in accordance with approved access points as adopted in the Coors Corridor Study and the North Valley River Crossing Study."
AMAFCA:	"No objection to zone change. The area is presently in a flood hazard zone; however, an AMAFCA project presently under construction and the second phase scheduled for bid opening in Feb. of 1982 would effectively remove the site from the flood hazard zone."
CRGSWCD:	"No objections."
County Environmental Health:	"Applicant was contacted on 8-7-81. City water is available. Sewage will be discharged to a septic tank system. Solid waste will be removed by a private hauler. We have no problems with this development."
State Highway Department:	"At this time the New Mexico State Highway Dept cannot issue any permanent driveway permits in the vicinity of the Coors and Montano Roads, NW intersection. This situation will continue until a final design is worked out for the intersection and its relation to the river crossing. I believe the bank should be made aware of this."
County Manager:	"No adverse comment."
County Zoning Administrator:	"No adverse comment."

PLANNING DIVISION COMMENTS TO THE CPC 9/2/81:

Requested is a change of zone from County A-1 to County C-1 for a portion of a section of land located at the southeast corner of Coors and Montano Roads, NW.

Applicant's Reason for Request "The Bank wishes to construct a five-year temporary branch bank at this intersection prior to the construction of a permanent facility at Coors and Dellyne."

Area Characteristics and Zoning History The applicant's property is part of the 1968 adopted La Luz Master Plan Area which called for a 70-acre shopping center on the southeast corner of Coors and Montano Roads NW. Numerous requests have been submitted for commercial zoning for the other three corners of this intersection. The major requests and subsequent actions are as follows:

Northwest corner: CZ-78-46, request County A-1 to County C-1 for a 5-acre parcel.

The original request was deferred months, awaiting the completion of the Northwest Mesa Area Guidelines. It was heard by the County Planning Commission Septemoer 18, 1979 and denied. It was appealed to the Bernalillo County Commission, which upheld the County Planning Commission decision on October 4, 1979. The decision was taken to court and remanded to the BCC for reconsideration on July 18, 1980. On August 19, 1980 the BCC approved the zone change from A-1 to C-1. That 5 acre parcel is presently zoned C-1. Concurrent with the zone change request at the County level was a request by the same applicant for annexation and rezoning to City C-1 for the same parcel of land. The application for annexation was contingent upon the receipt of commercial zoning. The City zoning action was deferred indefinitely at the Environmental Planning Commission level and the annexation was not pursued by the applicant.

Southwest corner: AX-77-8, Z-77-28, CZ-81-32, request County A-1 to City C-2 for a 69 acre tract.

The applicant requested C-2 zoning in conjunction with annexation of a portion of Taylor Ranch. Due to the complexity of the annexation request, the request was deferred several months while details were worked out. Staff's final recommendation for the corner was to annex it with SU zoning for a Residential/Office/Commercial complex with the detailed development plans to be discussed after the adoption of the North Valley River Crossing Study. The property was never annexed as part of this request and retained County A-1 zoning. A more recent request in June of 1981 was made for a zone change from County A-1 to County C-1 to allow a major retail shopping center at the corner. The request was withdrawn.

Northeast Corner: CZ-80-1, Request County A-1 to County C-1 for 24.547 acres

The original request was deferred indefinitely by the County Planning Commission on April 2, 980. The request was reactivated, deferred and then withdrawn on July 1, 1981.

Applicable Plans and Policies The applicant's property is within the Established Urban Area of the Albuquerque/Bernalillo County Comprehensive Plan (3-9 du/ac). The property is covered by the adopted Northwest Mesa Area Planning Guidelines and is within the area of the present Coors Corridor Study. The North Valley River Crossing Study defined Montano as a river crossing corridor. Controlled access to Coors and Montano will be necessary when road improvements are designed.

Zone Change Any zone change in the area of Coors and Montano would be premature at this time. The Northwest Mesa Area Planning Guidelines specificially discourages the location of two regional shopping centers at this location. Since the property owners of the land at all four corners desire commercial zoning, a sector development plan for all properties surrounding the intersection is needed before any rezoning is accomplished.

The applicant has requested a zone change to C-1 to allow a temporary bank to be built on the property. It is anticipated that this bank would be moved to the intersection of Dellyne and Coors within five years. The C-1 zone cannot, by Ordinance, be given with conditions. This fact, coupled with the need for a sector plan for the area, mandates that Staff recommend against the zone change. However, Staff would support an alternative which would allow a bank use on this corner for five years.

FINDINGS: 1. A zone change to C-1 would at this time be premature due to the pressure for commercial zoning in the area and adopted planning policies.

2. The temporary use of the applicant's property for a bank would not be detrimental to the community. Access to the property, however, would be on a temporary access permit basis.

RECOMMENDATION: Denial of CZ-81-53 is recommended, based on Finding 1 above.

Cynthia Bruce, Planner

cc: Ovenwest, Inc. and the First National Bank, P.O. Box 1305; 87103
Herbert M. Denish & Associates, P.O. Box 2001; 87103

IT IS REQUESTED THAT THE APPLICANT/AGENT BE PRESENT AT THE MEETING

RECEIVED

SEP 08 1981

HERBERT M. DE
& ASSOC., I

OFFICIAL NOTICE

Herbert M. Denish & Associates
P.O. Box 2001
Albuquerque, N.M. 87103

Date: September 3, 1981
NOTIFICATION OF DECISION
File No. CZ-81-53 Amended
Location: An unplatted portion of the SW/4 of Sec 25, T11N, R2E

At their meeting of September 2, 1981 the County Planning Commission amended your request to a Special Use for a Specific Use for a Temporary Bank for a period of four years for an unplatted portion of the SW/4 of Sec 25, T11N, R2E, located on the southeast corner of Coors and Montano Roads, NW containing approximately 1 acre. (E-12)

If you wish to appeal this decision, you must do so by 9/17/81 in the manner described below. A filing fee of $40.00 is required.

APPEALS. Appeal of any denial or approval of an application by the Bernalillo County Planning Commission may be submitted in writing to the Board of County Commissioners within 15 days after the date of determination by the Bernalillo County Planning Commission shall not be included in the 15-day period for filing an appeal, and if the fifteenth days falls on a Saturday, Sunday or holiday, the next working day shall be considered as the deadline for filing the appeal.

A building permit or Certificate of Occupancy & Compliance shall not be issued until any appeal is decided, or the time for filing such appeal has expired. If a written protest is signed by the owners of 20% or more of either the area of the lots and lands included in such proposed change or of those immediately adjacent within 100 ft of the area proposed for change, disregarding public ways, such change to the Zone Map shall require the majority vote of the members of the Board of County Commissioners.

Written notice of appeal shall be filed with the Zoning Administrator.

John R. Lucero, County Planner

cc: County Manager
County Zoning Administrator
Ovenwest, Inc, P.O. Box 1305; 87103
Bernard Swinburne, First National Bank, P.O. Box 1305; 87103

legal desc. for
Money-matic at
Coors + Montano

A certain tract of land situate in Section 25, T11N, R2E, NMPM, Bernalillo County, New Mexico, and being more particularly described as follows:

Beginning at the northwesterly corner of the said tract, being the point of intersection of the southeasterly right of way line of State Road 448 (Coors Road, NW) and the southwesterly right of way line of Montano Road, NW from whence the southwest corner of Section 25, T11N, R2E, NMPM, bears S 51° 52' W, 2,345.64 feet distant;

Thence S 58° 29' 20" E, 233.86 feet along the southwesterly right of way line of Montano Road, NW to a point;

Thence S 42° 10' 36" W, 190.00 feet to a point;

Thence N 58° 29' 20" W, 233.86 feet to a point;

Thence Northeasterly, 190.01 feet along the arc of a curve left, said curve being the southeasterly right of way line of Coors Road, NW a chord length of 190.00 feet, bearing N 42° 10' 36" E, to the point of beginning.

Said tract contains 1.000 Acres more or less.

GRANT OF TEMPORARY
EASEMENT FOR DRAINAGE

RAY A. GRAHAM III, a married man dealing with his sole and separate property ("Grantor") states:

1. Recital.

Grantor owns the real estate described on the attached Exhibit A ("Tract 1"), and THE FIRST NATIONAL BANK IN ALBUQUERQUE ("Grantee") leases from Grantor the adjacent real estate described on the attached Exhibit B ("Tract 2").

2. Grant of Easement.

Grantor grants an Easement on Tract 1 to Grantee, for the benefit of Tract 2 (the "Easement") for the purpose of temporary drainage of water from Tract 2 on, over and across Tract 1. Grantee may enter upon Tract 2 to maintain the Easement to allow water to flow from Tract 2 to the ditch and spillway at the north easterly corner of Tract 1.

3. Term of Temporary Easement.

The Easement will automatically terminate upon the termination of the Lease, dated January 29, 1982, between Grantor and Grantee covering Tract 2.

4. Indemnity.

Grantee will defend Grantor from any and all claims for damages for whatsoever cause incidental to the

exercise of the rights herein granted, unless caused by Grantor, and further Grantee will save Grantor harmless from any and all liability that may arise as a result of the construction and use of the Easement for the purposes set forth, unless caused by Grantor.

5. Binding Effect.

This Grant of Easement for Drainage is binding upon Grantor, his successors and assigns and is for the benefit of and may be enforced by Grantee, its successors and assigns.

DATED: July 2, 1982.

Ray A. Graham

RAY A. GRAHAM III

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me on July 2, 1982, by Ray A. Graham III.

Charles Price

Notary Public

My commission expires:

9-26-84

DESCRIPTION

A tract of land situate in the SW¼ of Section 25, T11N, R2E, N.M.P.M., Bernalillo County, New Mexico, and being more particularly described as follows:

BEGINNING at the northwesterly corner, a point on the southwesterly right-of-way of Montano Road, NW, whence the southwesterly corner of Tract "A-1-A" of Summary Plat showing Tracts "A-1-A" & "A-1-B" of the Plat of Lands of Joel P. Taylor, filed in the office of the County Clerk of Bernalillo County, on March 11, 1980, bears N34°03'08 W, 256.74 feet, and from said beginning point running thence, S58°26'13"E, 93.00 feet along said right-of-way to the northeasterly corner; thence leaving said right-of-way,
S57°33'24"W, 236.00 feet to the southeasterly corner; thence,
N58°26'13"W, 30.00 feet to the southwesterly corner; thence,
N42°21'15"E, 215.95 feet to the point and place of beginning.

Tract contains 0.2995 acre, more or less.

Bohannan–Huston, Inc.
4125 Carlisle Blvd., N.E.
Albuquerque, NM 87107

Job No. 2 022 4
July 7, 1982

A. Dwain Weaver
N.M.P.L.S. No. 6544

A. DWAIN WEAVER NEW MEXICO 6544 REGISTERED LAND SURVEYOR

EXHIBIT A

DESCRIPTION

A tract of land situate in the SW¼ of Section 25, T11N, R2E, N.M.P.M., Bernalillo County, New Mexico, and being more particularly described as follows:

BEGINNING at the northwesterly corner, being the point of intersection of the southeasterly right-of-way of State Road 448 (Coors Road NW) and the southwesterly right-of-way of Montano Road, NW, whence the southwesterly corner of Tract "A-1-A" of Summary Plat showing Tracts "A-1-A" & "A-1-B" of the Plat of Lands of Joel P. Taylor, filed in the office of the County Clerk of Bernalillo County, on March 11, 1980, bears N40°45'30"E, 107.38 feet, and from said beginning point, continuing along said southwesterly right-of-way,
S58°26'13"E, 251.00 feet to the northeasterly corner; thence leaving said southwesterly right-of-way,
S42°21'15"W, 215.95 feet to the southeasterly corner; thence,
N58°26'13"W, 251.00 feet to the southwesterly corner, a point on the said southeasterly right-of-way of State Road 448 (Coors Road, NW), a point on curve; thence continuing along said southeasterly right-of-way, 215.96 feet along the arc of a curve to the left having a radius of 5804.58 feet and a chord bearing N42°21'15"E, 215.95 feet to the point and place of beginning.

Tract contains 1.2190 acres, more or less.

Bohannan–Huston, Inc.
4125 Carlisle Blvd., N.E.
Albuquerque, NM 87107

Job No. 2 022 4
July 7, 1982

A. Dwain Weaver
A. Dwain Weaver
N.M.P.L.S. No. 6544

DWAIN WEAVER
NEW MEXICO
6544
REGISTERED LAND SURVEYOR

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

EXHIBIT B

'82 JUL 16 A10:09

Misc 944 869-872
BK. PG.

TENNY C. CULP
CO. CLERK & RECORDER
DEPUTY